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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,818	11/29/2001	Eiji Furukawa	122.1476	9741

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WASHINGTON, DC 20005

EXAMINER
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KIM, CHONG R

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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11/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

09/995,818

**Applicant(s)**

FURUKAWA ET AL.

**Examiner**

Charles Kim

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7,8,11,12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7,8,11,12 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment and Arguments***

1. Applicants' amendment filed on August 24, 2007 has been entered and made of record.
2. In view of Applicants' amendment, the 112 second paragraph rejection is withdrawn.
3. Applicants' arguments have been fully considered, but they are not deemed to be persuasive for at least the following reasons.

Applicants argue (page 6) that their claimed invention (claims 7 and 8) differs from the prior art because "Merchant is merely a sorting step sorting instances based on instance names and does not change the name of each instance." The Examiner disagrees. Merchant clearly discloses changing the names during the sorting process. For example, Figure 2E illustrates the sorting process where the names mc<0>, mc<1> in Figure 2D are changed to mc<2>, mc<3>. Note that the names are changed and sorted in ascending order. Contrary to what Applicants contend, Merchant teaches the concept of changing names and sorting the names in ascending order. Therefore, the combination of Suzuki and Merchant still read on claim 7, as amended.

Applicants further argue (page 6) that their claimed invention (claims 11 and 12) differs from the prior art because "nothing in Suzuki suggests arranging selected symbols to form a column or a row and to designating intervals between symbols." The Examiner disagrees. As explained in the previous Office action (page 7), Suzuki allows the user to place the symbols in any manner he/she wishes. Accordingly, Suzuki's disclosure would have suggested to one of ordinary skill in the art to arrange the selected symbols to form a column or a row, in order to keep the symbols in an organized and aesthetically pleasing manner.

Applicants' arguments with respect to claim 14 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (USPN 6,301,694, hereinafter Lee).

Regarding claim 14, Lee discloses a logic drawing entry apparatus for drawing a plurality of drawing sheets for hierarchical design of a logic circuit, comprising:

a determination means determining whether if a particular level of hierarchical design of a logic circuit comprises a plurality of sub-symbols [col. 6, ll. 58-col. 7, ll. 32 and figure 8. Note that the first window that includes H0 and H1 determines whether a particular level (1) comprises a plurality of sub-symbols (H1)];

a drawing means for drawing, upon the determination, a plurality of different drawing sheets (windows) by dividing the plurality of sub-symbols into individual sub-symbols so that each of the different drawing sheets only includes any one of the sub-symbols, each sub-symbol belongs to the same level as the particular level [figure 8. Note that the window 402 includes only one of the sub-symbols (H1)], and a net drawing means for drawing nets (branches) for each of the symbols [figure 8].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Suzuki et al. (USPN 6,321,370 hereinafter Suzuki) and Merchant et al. (USPN 6,490,712, hereinafter Merchant).

Regarding claim 7, Suzuki discloses a logic drawing entry apparatus for processing a plurality of drawing sheets for computer aided design of logic circuits, each of the plurality of drawing sheets indicating a logic circuit having at least one symbol, comprising: means for creating an inter-drawing diagram file which describes respective positions of the plurality of drawing sheets on one screen and attributes of the plurality of drawing sheets (col. 3, lines 10 – 18; col. 3, lines 56 – 60); inter-drawing indication means for indicating, on the screen, the plurality of drawing sheets according to the description in said inter-drawing diagram file by miniaturizing the size of each of said plurality of drawing sheets (Figures 5 – 9; col. 4, lines 39 – 54); inter-drawing connection counting means for counting the number of connections between any combination of said two of said plurality of drawing sheets, wherein a connection describes the relationship between two symbols on the two of said plurality of drawing sheets (Figure 3; col. 3, lines 10 – 18); and net connection relation drawing means for drawing nets among said

plurality of drawing sheets miniaturized and indicated on said screen, an indication of said nets being modified (Figures 8 and 9; col. 5, lines 12 – 46).

Suzuki further discloses displaying the drawing sheets names, but does not teach of modifying the names. However, Merchant teaches a method of changing names in ascending order (Figures 2A-2E).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Suzuki's teaching with Merchants teaching of Figure 3A, step 330, because Merchant's approach makes finding names easier.

Regarding claim 8, the combination teaches the logic entry apparatus of claim 7, wherein the drawing name modifying means further designates intervals (since fig. 3A uses alphanumeric sort via numbers) between the names of said plurality of drawing sheets.

6. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Suzuki and Dahl et al. (USPN 6,557,153, hereinafter Dahl).

Regarding claim 9, Suzuki discloses a logic drawing entry apparatus for processing a drawing sheet indicating a logic circuit which has a plurality of symbols and nets connecting among said symbols, logic drawing entry apparatus comprising: symbol selecting means for selecting a symbol via a user to be moved and a position to which the selected symbol moves (Figures 8 and 9; col. 4, lines 25 – 38); judging means for judging whether or not a symbol exists at said position selected (Suzuki must in some fashion deal with this requirement as two overlapping components could not be manufactured.); symbol moving means for moving said selected symbols to said position if there is no symbol at said selected position (Figure 9);

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[Symbol swapping means for swapping said selected symbol for a symbol at said selected position if there is a symbol at said selected position, so that positions of said selected symbol and said symbol at said selected position are swapped each other]; and net redrawing means for redrawing nets for said selected symbols after the movement or swap while keeping the connection relations between said selected symbols before the movement (Figure 9); and arranging means for arranging a plurality of selected symbols to form a column or a row (Figure 9, Suzuki clearly allows the user to place the symbols in whatever fashion he or she wishes.).

As shown above Suzuki discloses all of the requirements of claim 11, except for the swap step. Suzuki clearly allows a user to move the logic blocks around, but never addresses the concept of swapping. Dahl teaches (col. 10, lines 1 – 12) that a user should be allowed the option of swapping two logic blocks.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for logic block swapping as taught by Dahl in the apparatus taught by Suzuki. Dahl teaches that swapping allows the user to make the optimum use of the area.

Regarding claim 12, Suzuki further discloses the logic drawing entry apparatus of claim 11, wherein said arranging means has a function of designating intervals between symbols (Figure 9).

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 571-272-7421. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

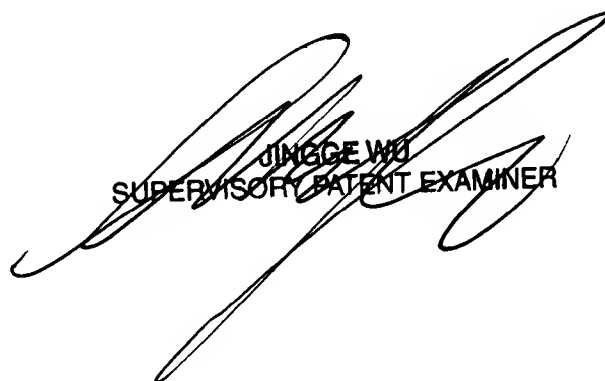


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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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